

### **Remarks**

Claims 1, 2, 21, 22, 35 and 36 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sato (US 6,567,179) in view of Sato (US 6,667,812). Claims 3 and 4 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sato ('179) in view of Yang (US 6,687,019).

Claims 5-20, 23-34 and 37-48 have been indicated as containing allowable subject matter. The Applicants would like to thank the Examiner for this indication of allowable subject matter.

Regarding the rejection of claims 3 and 4, it is noted that Yang was filed on May 27, 1999 and issued into a patent on February 3, 2004. It is further noted that the present application was filed on March 15, 2000 and claims priority to Japanese Patent Application No. 11-071463 filed on March 17, 1999, which is prior to the filing date of Yang. A certified copy of Japanese Patent Application No. 11-071463, and an English language translation of Japanese Patent Application No. 11-071463 along with a statement verifying the accuracy of the translation have previously been submitted. The subject matter of at least claims 3 and 4 indicated as being disclosed in Yang is supported by the priority document. As a result, Yang cannot be used as a reference against these claims.

The rejection of claims 1, 2, 21, 22, 35 and 36 is respectfully traversed and submitted to be inapplicable to these claims for the following reasons.

Claim 1 is patentable over the combination of Sato ('179) and Sato ('812), since claim 1 recites a printer including, in part, printer language specifications storage means for storing, under control of an operating system operable on a host information processor, printer language specifications which indicate a correspondence between a plot object forming application print data generated at printing by an application operable on the host information processor and a printer language for printing the plot object on the printer; printer language specifications setting data generation means for reading the printer language specifications from the printer language specifications storage means to generate printer language specifications setting data predetermined therefor; and language specifications setting data transmission processing start means for outputting the printer language specifications setting data generated by the printer language specifications setting data generation means with a predetermined timing. The combination of Sato ('179) and Sato ('812) fails to disclose or suggest these features as recited in claim 1.

Sato ('179) discloses a system for controlling communication between a printer 202 and a host computer 201. The printer 202 has a communication interface 203, a communication control block 210, a data recognition block 204, a print data receiving buffer 205, a control data receiving buffer 206, a formatter analyzing block 207, a control command analyzing block 208, and a printer engine 209. (See column 8, lines 12-63 and Figure 2).

The rejection indicates that the print data receiving buffer 205, the formatter analyzing block 207, and communications interface 203 of Sato ('179) correspond to the printer language specifications storage means, the printer language specifications setting data generation means, and the language specifications setting data transmission processing start means, respectively. However, it is apparent that these elements of Sato ('179) do not correspond to the claimed features.

The printer language specifications storage means is recited as storing printer language specifications which indicate a correspondence between a plot object forming application print data generated at printing by an application operable on the host information processor and a printer language for printing the plot object on the printer. However, the print data receiving buffer 205 is disclosed as buffering print data contained in communication data being received from the host computer 201 via the communication interface 203. (See column 8, lines 47-52). The print data is described as being received via the communication interface 203 together with control data as communication data, and as forming the image to eventually be printed. (See column 8, lines 18-21 and lines 47-49; and column 9, lines 21-30). From this description of the print data receiving buffer 205 and the print data stored therein, it is clear that the print data does not correspond to the printer language specifications, since the print data does not indicate a correspondence between a plot object forming application print data generated at printing by an application operable on the host information processor and a printer language for printing the plot object on the printer. Instead, the print data is representative of the image to be printed. Therefore, the print data receiving buffer 205 fails to disclose or suggest the printer language specifications storage means.

In addition, it is noted that the printer language specifications storage means is recited as storing, under control of an operating system operable on a host information processor. The rejection indicates that the application program disclosed in Sato ('179) (see column 8, lines 13-17) corresponds to the operating system of claim 1. However, it is clear that an operating system and

an application program are entirely different. In fact, an application program operates under control of an operating system. As a result, Sato ('179) also fails to disclose or suggest this feature of the printer language specifications storage means.

The printer language specifications setting data generation means is recited as reading the printer language specifications from the printer language specifications storage means to generate printer language specifications setting data predetermined therefor. However, the formatter analyzing block 207 is disclosed as analyzing the print data stored in the print data receiving buffer 205, expanding the print data into bit map data printable by the printer engine 209 and sending the bit map data to the printer engine 209. (See column 9, lines 23-30). As discussed above, the print data is representative of the image to be printed and does not correspond to printer language specifications setting data. To this end, the formatter analyzing block 207 converts the print data into the bit map data used by the printer engine 209 to print an image and does not generate printer language specification setting data, as is the case with the printer language specifications setting data generation means. Therefore, the formatter analyzing block 207 does not disclose or suggest the printer language specifications setting data generation means.

The language specifications setting data transmission processing start means is recited as outputting the printer language specifications setting data generated by the printer language specifications setting data generation means with a predetermined timing. However, the communication interface 203 is operable to communicate with the host computer 201 and receive the communication data therefrom. The communication interface 203 passes the received communication data to the communication control block 210 where its protocol is identified. (See column 8, lines 28-38). As discussed above, the formatter analyzing block 207 generates the bit map data, which does not correspond to the claimed printer language specification setting data, and sends the bit map data to the printer engine 209. The formatter analyzing block 207 does not send any data to the communication interface 203 for output. (See Figure 2). Therefore, even if the bit map data corresponded to the printer language specification setting data, the communication interface 203 does not correspond to the language specifications setting data transmission processing start means. Further, the communication interface 203 is not disclosed or suggested as outputting any data at a

predetermined timing. Therefore, the communication interface 203 does not disclose or suggest the language specifications setting data transmission processing start means.

Since Sato ('179) fails to disclose or suggest the printer language specifications storage means, the printer language specifications setting data generation means, and the language specifications setting data transmission processing start means recited in claim 1, as discussed above, it is necessary for Sato ('812) to address these deficiencies in order for the combination to render the present invention in claim 1 obvious.

Sato ('812) discloses a printer control system that includes a host computer 100 and a printer 1500 that communicate via a bidirectional interface. (See column 9, line 58 - column 10, line 4 and Figure 4). However, Sato ('812) also fails to disclose or suggest the printer language specifications storage means, the printer language specifications setting data generation means, and the language specifications setting data transmission processing start means as recited in claim 1. As a result, the combination of Sato ('179) and Sato ('812) fails to disclose or suggest the present invention as recited in claim 1.

Claim 2 is patentable over the combination of Sato ('179) and Sato ('812), since claim 2 recites a printer including, in part, control language specifications storage means for storing, under control of an operating system operable on a host information processor, control language specifications which indicate a correspondence between a control element forming application print data generated at printing by an application operable on the host information processor and a control language for setting a control element on the printer; control language specifications setting data generation means for reading the control language specifications from the control language specifications storage means to generate control language specifications setting data predetermined therefor; and language specifications setting data transmission processing start means for outputting the control language specifications setting data generated by the control language specifications setting data generation means with a predetermined timing. The combination of Sato ('179) and Sato ('812) fails to disclose or suggest these features as recited in claim 2.

The rejection indicates that the control data receiving buffer 206, the control command analyzing block 208, and the communication interface 203 of Sato ('179) correspond to the control language specifications storage means, the control language specifications setting data generation

means, and the language specifications setting data transmission processing start means, respectively. However, it is apparent that these elements of Sato ('179) do not correspond to the claimed features.

The control language specifications storage means is recited as storing control language specifications which indicate a correspondence between a control element forming application print data generated at printing by an application operable on the host information processor and a control language for setting the control element on the printer. However, the control data receiving buffer 206 is disclosed as buffering control data contained in the communication data received from the host computer 201 via the communication interface 203. (See column 8, lines 47-52). The control data is described as being received via the communication interface 203 together with the print data as the communication data, and as including control information to control the communication control block 210 and the formatter analyzing block 207 of the printer 202. (See column 8, lines 18-21 and lines 47-49; and column 9, lines 30-39). From this description of the control data receiving buffer 206 and the control data stored therein, it is clear that the control data does not correspond to the control language specifications, since the control data does not indicate a correspondence between a control element forming application print data generated at printing by an application operable on the host information processor and a control language for setting the control element on the printer. Instead, the control data is representative of control information used to control the communication control block 210 and the formatter analyzing block 207 of the printer 202. Therefore, the control data receiving buffer 206 fails to disclose or suggest the control language specifications storage means.

In addition, it is noted that the control language specifications storage means is recited as storing, under control of an operating system operable on a host information processor. The rejection indicates that the application program disclosed in Sato ('179) (see column 8, lines 13-17) corresponds to the operating system of claim 2. However, it is clear that an operating system and an application program are different as discussed above. As a result, Sato ('179) also fails to disclose or suggest this feature of the control language specifications storage means.

The control language specifications setting data generation means is recited as reading the control language specifications from the control language specifications storage means to generate control language specifications setting data predetermined therefor. However, the control command

analyzing block 208 is disclosed as analyzing the control data stored in the control data receiving buffer 206, and sending control information to the various portions of the printer 202. (See column 9, lines 30-39). As discussed above, the control data is representative of control information and does not correspond to control language specifications setting data. To this end, the control data analyzing block 208 analyzes the control data to determine whether it should be used to control the communication control block 210 or the formatter analyzing block 208 and does not generate control language specification setting data, as is the case with the control language specifications setting data generation means. Therefore, the control data analyzing block 208 does not disclose or suggest the control language specifications setting data generation means.

The language specifications setting data transmission processing start means is recited as outputting the control language specifications setting data generated by the control language specifications setting data generation means with a predetermined timing. However, the communication interface 203 is operable to communicate with the host computer 201 and receive the communication data therefrom. The communication interface 203 passes the received communication data to the communication control block 210 where its protocol is identified. (See column 8, lines 28-38). As discussed above, the control data analyzing block 208 analyzes the control data, which does not correspond to the claimed control language specification setting data, and sends the control data to the communication control block 210 and the formatter analyzing block 207, when applicable. The control data analyzing block 208 does not send any control data to the communication interface 203 for output. (See Figure 2). Therefore, even if the control data corresponded to the control language specification setting data, the communication interface 203 does not correspond to the language specifications setting data transmission processing start means. Further, the communication interface 203 is not disclosed or suggested as outputting any data at a predetermined timing. Therefore, the communication interface 203 does not disclose or suggest the language specifications setting data transmission processing start means.

Since Sato ('179) fails to disclose or suggest the control language specifications storage means, the control language specifications setting data generation means, and the language specifications setting data transmission processing start means recited in claim 2, as discussed above,

it is necessary for Sato ('812) to address these deficiencies in order for the combination to render the present invention in claim 2 obvious.

Sato ('812) discloses a printer control system that includes a host computer 100 and a printer 1500 that communicate via a bidirectional interface. (See column 9, line 58 - column 10, line 4 and Figure 4). However, Sato ('812) also fails to disclose or suggest the control language specifications storage means, the control language specifications setting data generation means, and the language specifications setting data transmission processing start means as recited in claim 2. As a result, the combination of Sato ('179) and Sato ('812) fails to disclose or suggest the present invention as recited in claim 2.

Claim 21 is patentable over the combination of Sato ('179) and Sato ('812), since claim 21 recites a printer driver provided in a host information processor having, in part, communication data determination means for determining, under control of an operating system operable on the host information processor, whether or not communication data received by bi-directional communication means is printer language specifications setting data which indicates a correspondence between a plot object forming application print data generated at printing by an application operable on the host information processor and a printer language for printing the plot object on the printer; printer language specifications setting means for registering printer language specifications according to the printer language specifications setting data determined by the communication data determination means; printer settings storage means for storing the printer language specifications according to the registering carried out by the printer language specifications setting means; and printer language generation means for obtaining, according to the application print data at printing, the printer language corresponding to the plot object from the printer settings storage means to generate printer language print data for transmission to the printer via the bi-directional communication means. The combination of Sato ('179) and Sato ('812) fails to disclose or suggest these features as recited in claim 21.

The rejection indicates that the data recognition block 204 and the formatter analyzing block 207 of Sato ('179) correspond to the communication data determining means and the printer language generation means, respectively. However, it is apparent that these elements of Sato ('179) do not correspond to the claimed features.

First and foremost, it is noted that the communication data determining means and the printer language generation means are recited in claim 21 as being provided in a host information processor. On the other hand, the data recognition block 204 and the formatter analyzing block 207 are clearly disclosed as being within the printer 202 and not the host computer 201. Therefore, the data recognition block 204 and the formatter analyzing block 207 cannot correspond to these claimed elements.

The communication data determining means is recited as determining, under control of an operating system operable on the host information processor, whether or not communication data received by bi-directional communication means is printer language specifications setting data which indicates a correspondence between a plot object forming application print data generated at printing by an application operable on the host information processor and a printer language for printing the plot object on the printer. However, the data recognition block 204 is disclosed as sorting the communication data into print data and control data from the communication control block 210, according to the type of protocol, and then sending the sorted data to either the print data receiving buffer 205 or the control data receiving buffer 206. (See column 8, lines 38-44 and Figure 2). Neither the print data, nor the control data, corresponds to the printer language specifications setting data, since neither indicates a correspondence as recited in claim 21. Therefore, the data recognition block 204 fails to disclose or suggest the communication data determining means.

The printer language generation means is recited as obtaining, according to the application print data at printing, the printer language corresponding to the plot object from the printer settings storage means to generate printer language print data for transmission to the printer. However, the formatter analyzing block 207 is disclosed as analyzing the print data stored in the print data receiving buffer 205, expanding the print data into bit map data printable by the printer engine 209, and sending the bit map data to the printer engine 209. (See column 9, lines 23-30). Expanding the print data differs from obtaining a printer language corresponding to a plot object. Therefore, the formatter analyzing block 207 does not disclose or suggest the printer language generation means.

In addition, it is noted that the communication data determining means is recited as determining, under control of an operating system operable on a host information processor. The rejection indicates that the application program disclosed in Sato ('179) (see column 8, lines 13-17)



corresponds to the operating system of claim 21. However, it is clear that an operating system and an application program are different as discussed above. As a result, Sato ('179) also fails to disclose or suggest this feature of the communication data determining means.

Since Sato ('179) fails to disclose or suggest the communication data determining means and the printer language generation means, as discussed above, and the printer language specifications setting means, as admitted in the rejection, it is necessary for Sato ('812) to address these deficiencies in order for the combination to render the present invention in claim 2 obvious.

Sato ('812) discloses printer environmental matching setting processing executed between the host computer 100 and the printer 1500. The host computer 100 has a printer driver file 11a storing a number of printer drivers corresponding to drivable printer control languages. Printing can be executed properly by switching to the appropriate printer driver based on information provided about the printer control language from the printer (See column 6, lines 44-62 and Figure 5).

The printer language specifications setting means is recited as being for registering printer language specifications according to the printer language specifications setting data determined by the communication data determination means. However, this is different from what is disclosed in Sato ('812), since Sato ('812) discloses selecting between printer drivers stored in the printer driver file 11a and not registering printer language specifications. Therefore, Sato ('812) fails to disclose or suggest the printer language specifications setting means.

Further, it is apparent that Sato ('812) also fails to disclose or suggest the communication data determining means and the printer language generation means as recited in claim 21. As a result, the combination of Sato ('179) and Sato ('812) fails to disclose or suggest the present invention as recited in claim 21.

Claim 35 is patentable over the combination of Sato ('179) and Sato ('812) for similar reasons as set forth above in support of claim 21. That is claim 35, like above claim 21, recites a printer driver program operable to cause a computer device, in part, to determine, under control of an operating system operable on a host information processor, whether or not communication data is printer language specifications setting data which indicates a correspondence between a plot object forming application print data generated at printing by an application operable on the host information processor and a printer language for printing a plot object on a printer; register printer

language specifications according to the determined printer language specifications setting data; and generate, with the application print data at printing, printer language print data for transmission to the printer according to the printer language corresponding to the registered plot object, which features are not disclosed or suggested by the combination of Sato ('179) and Sato ('812).

Claim 22 is patentable over the combination of Sato ('179) and Sato ('812), since claim 22 recites a printer driver provided in a host information processor having, in part, communication data determination means for determining, under control of an operating system operable on the host information processor, whether or not communication data received by bi-directional communication means is control language specifications setting data which indicates a correspondence between a control element forming application print data generated at printing by an application operable on the host information processor and a control language for setting a control element on a printer; control language specifications setting means for registering control language specifications according to the control language specifications setting data determined by the communication data determination means; and control language generation means for obtaining, according to the application print data at printing, the control language corresponding to the control element from the printer settings storage means to generate control language print data for transmission to the printer via the bi-directional communication means. The combination of Sato ('179) and Sato ('812) fails to disclose or suggest these features as recited in claim 22.

The rejection indicates that the data recognition block 204 and the formatter analyzing block 207 of Sato ('179) correspond to the communication data determining means and the control language generation means, respectively. However, it is apparent that these elements of Sato ('179) do not correspond to the claimed features.

First and foremost, it is noted that the communication data determining means and the control language generation means are recited in claim 22 as being provided in a host information processor. On the other hand, the data recognition block 204 and the formatter analyzing block 207 are clearly disclosed as being within the printer 202 and not the host computer 201. Therefore, the data recognition block 204 and the formatter analyzing block 207 cannot correspond to these claimed elements.

The communication data determining means is recited as being for determining, under control of an operating system operable on the host information processor, whether or not communication data received by bi-directional communication means is control language specifications setting data which indicates a correspondence between a control element forming application print data generated at printing by an application operable on the host information processor and a control language for setting the control element on the printer. However, the data recognition block 204 is disclosed as sorting the communication data into print data and control data from the communication control block 210, according to the type of protocol, and then sending the sorted data to either the print data receiving buffer 205 or the control data receiving buffer 206. (See column 8, lines 38-44 and Figure 2). Neither the print data, nor the control data, corresponds to the control language specifications setting data, since neither indicates a correspondence as recited in claim 22. Therefore, the data recognition block 204 fails to disclose or suggest the communication data determining means.

The control language generation means is recited as obtaining, according to the application print data at printing, the control language corresponding to the control element from the printer settings storage means to generate control language print data for transmission to the printer. However, the formatter analyzing block 207 is disclosed as analyzing the print data stored in the print data receiving buffer 205, expanding the print data into bit map data printable by the printer engine 209 and sending the bit map data to the printer engine 209. (See column 9, lines 23-30). Expanding the print data differs from obtaining a control language corresponding to a control element. Therefore, the formatter analyzing block 207 does not disclose or suggest the control language generation means.

In addition, it is noted that the communication data determining means is recited as determining, under control of an operating system operable on a host information processor. The rejection indicates that the application program disclosed in Sato ('179) (see column 8, lines 13-17) corresponds to the operating system of claim 22. However, it is clear that an operating system and an application program are different as discussed above. As a result, Sato ('179) also fails to disclose or suggest this feature of the communication data determining means.

Since Sato ('179) fails to disclose or suggest the communication data determining means and the control language generation means, as discussed above, and the control language specifications setting means, as admitted in the rejection, it is necessary for Sato ('812) to address these deficiencies in order for the combination to render the present invention in claim 2 obvious.

Sato ('812) discloses printer environmental matching setting processing executed between the host computer 100 and the printer 1500. The host computer 100 has a printer driver file 11a storing a number of printer drivers corresponding to drivable printer control languages. Printing can be executed properly by switching to the appropriate printer driver based on information provided about the printer control language from the printer (See column 6, lines 44-62 and Figure 5).

The control language specifications setting means is recited as registering control language specifications according to the control language specifications setting data determined by the communication data determination means. However, this is different from what is disclosed in Sato ('812), since Sato ('812) discloses selecting between printer drivers stored in the printer driver file 11a and not registering control language specifications. Therefore, Sato ('812) fails to disclose or suggest the control language specifications setting means.

Further, it is apparent that Sato ('812) also fails to disclose or suggest the communication data determining means and the control language generation means as recited in claim 22. As a result, the combination of Sato ('179) and Sato ('812) fails to disclose or suggest the present invention as recited in claim 22.

Claim 36 is patentable over the combination of Sato ('179) and Sato ('812) for similar reasons as set forth above in support of claim 22. That is claim 36, like above claim 22, recites a printer driver program operable to cause a computer device, in part, to determine, under control of an operating system operable on a host information processor, whether or not communication data is control language specifications setting data which indicates a correspondence between a control element forming application print data generated at printing by an application operable on the host information processor and a control language for setting a control element on a printer; register control language specifications according to the determined control language specifications setting data; and generate, with the application print data at printing, control language print data for transmission to the printer according to the correspondence between the registered control element

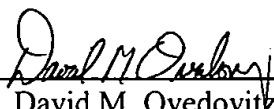
and the control language, which features are not disclosed or suggested by the combination of Sato ('179) and Sato ('812).

Because of the above mentioned distinctions, it is believed clear that claims 1-48 are allowable over the combination of Sato ('179) and Sato ('812). Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 1-48. Therefore, it is submitted that claims 1-48 are clearly allowable over the prior art of record.

In view of the above remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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